
Growing WILD

Utah's Project WILD Newsletter

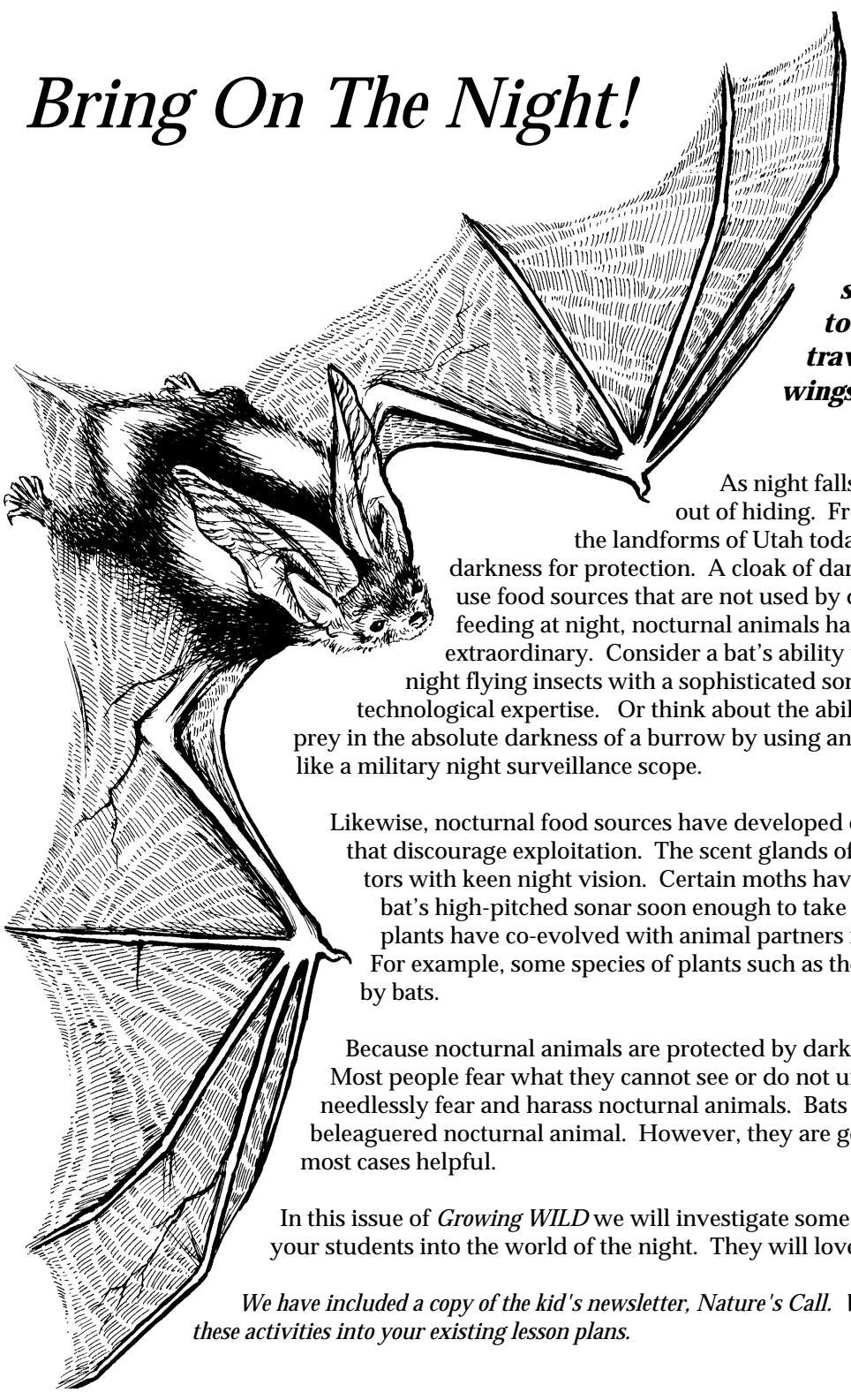
Fall 1993



Bring On The Night!

***To go in the dark
with a light is to know
the light. To know the
dark, go dark. Go without
sight, and find that the dark,
too, blooms and sings, and is
traveled by dark feet and dark
wings.***

-Wendell Berry



As night falls into place nocturnal animals slip out of hiding. From the shores of ancient oceans to the landforms of Utah today, animals have used the cover of darkness for protection. A cloak of darkness allows nocturnal animals to use food sources that are not used by diurnal animals. As a result of feeding at night, nocturnal animals have developed adaptations that are extraordinary. Consider a bat's ability to exploit the huge populations of night flying insects with a sophisticated sonar system that is beyond human technological expertise. Or think about the ability of rattlesnakes to locate their prey in the absolute darkness of a burrow by using an infra-red heat seeking organ much like a military night surveillance scope.

Likewise, nocturnal food sources have developed complex strategies and behaviors that discourage exploitation. The scent glands of skunks protect them from predators with keen night vision. Certain moths have developed the ability to detect a bat's high-pitched sonar soon enough to take evasive action. And in some cases plants have co-evolved with animal partners in a way that benefits them both. For example, some species of plants such as the maguey plant are only pollinated by bats.

Because nocturnal animals are protected by darkness they are hidden from humans. Most people fear what they cannot see or do not understand. As a result some people needlessly fear and harass nocturnal animals. Bats are probably the best example of a beleaguered nocturnal animal. However, they are generally harmless to humans and in most cases helpful.

In this issue of *Growing WILD* we will investigate some of Utah's nocturnal animals. Take your students into the world of the night. They will love it!!

We have included a copy of the kid's newsletter, Nature's Call. We hope you are able to incorporate these activities into your existing lesson plans.

Resource File

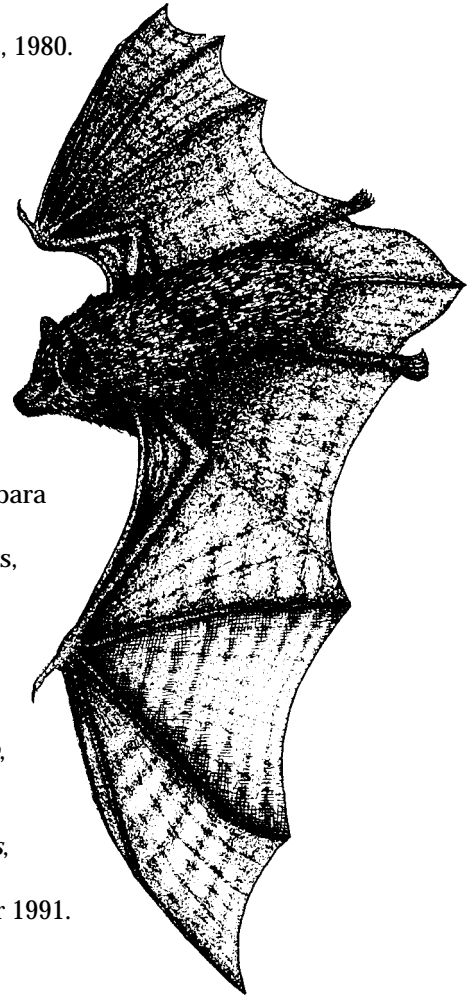
Bats of the World

Contact the Project WILD Office (801-538-4719) to check out the following materials in the new Resource File on bats!

- "Bats of Utah," Robert Hasenyager, Division of Wildlife Resources, 1980.
- "Bats," ZooBooks, Wildlife Education, Ltd., 1989.
- "Amazing Mammals, Part II," NatureScope, National Wildlife Federation, 1989.
- America's Neighborhood Bats, Understanding and Learning to Live in Harmony with Them, Merlin Tuttle, University of Texas Press, 1980.
- "The Bat House Builder's Handbook," Merlin Tuttle and Donna Hensley, Bat Conservation International, 1993.
- "The Most Famous Bat in the World," Bacardi Imports, Inc., 1984.
- Extremely Weird Bats, Sarah Lovett, John Muir Publications, Santa Fe, NM 1991.
- The World of Bats, Sylvia Johnson, Lerner Publications Co., Minneapolis, 1985. (Elem.)
- Shadows of Night, The Hidden World of the Little Brown Bat, Barbara Bash, Sierra Club, 1993. (Elem.)
- "Bats of Arizona," Special Heritage Edition, Arizona Wildlife Views, Arizona Game & Fish Department, August 1993.
- "About Bats," Educator's Activity Book, Bat Conservation International, 1991.

Articles:

- "Bats Incredible!," Frank Misiti, Jr., *Science Teacher*, May 1985.
- "Guess Who's Coming To Dinner," Bruce Fellman, *National Wildlife*, National Wildlife Federation, February-March, 1993.
- "The Wings of Night," David Robinson, *Defenders*, October 1982.
- "Predator and Prey: Life and Death Struggles," James Fullard, *Bats*, Bat Conservation International, Summer 1991.
- "Seeing in the Dark," *Bats*, Bat Conservation International, Summer 1991.



Videos--

The following videos are also available for check-out from the Project WILD office:

- "Bats: Myth and Reality" (for middle/high school), Bat Conservation International, 16 min.
- "Bats of America" (for grades 4-6 and middle school), Bat Conservation International, 14 min.
- "Very Elementary Bats" (for primary grades), Bat Conservation International, 6 min.

New WILD Spotted Bat T-Shirt!

Hot off the press and going fast is our new T-shirt which features the spotted bat (a larger version of the bat found on the first page of this newsletter) -- in pursuit of a moth! Designed by Jill Rensel, who drew the popular brine shrimp for our last T-shirt, the spotted bat is featured on white, raspberry or paprika 100% cotton shirts. Available in large and extra large sizes for \$10. Call the Project WILD office (801-538-4719) to order!

Bats of Arizona!

Contact the Project WILD office (538-4719) for one of Arizona's new instructional posters featuring photographs of the bats of the south-west. Appropriate for the study of Utah bats because Utah and Arizona share many of the same bat species. The poster also includes detailed content information on the back. **Also available is Arizona's new publication on bats!** This 36-page booklet contains background information on individual species with accompanying color photographs. Contact Project WILD for your copy. Both are free. Thanks to Arizona's Project WILD for providing these excellent resources for our Utah teachers.

Spotted Bat Poster

Come face to face with one of nature's most unique mammals! Utah's new Discover Utah Wildlife poster features a close, colorful look at the intricate appearance of the spotted bat. Easily recognized by the three white spots on its black, furry back, the spotted bat also has the largest ears of any North American bat (almost 2 inches long!). Ideal for use with First Impressions, Adaptation Artistry and units on mammals, this new 17" x 22" poster calls your attention to some of the world's least understood animals. **Call the Project WILD office (801-538-4719) for a free copy or pick one up at a Wildlife Resources regional office.**



A Close Look at the Spotted Bat (Euderma maculatum)

Description: Black furry back with three white spots; dark gray to almost white front; ears are pink to sandy brown and are enormous in relationship to its body size; wingspan is 315 mm; adults weigh about 16 grams, and newborns weigh about 4 grams.

The spotted bat, a member of the family Vespertilionidae, is one of 18 species of bats found in Utah. Although easily distinguished from other bats by its coloration, the spotted bat is not commonly observed and is considered an exciting sighting by biologists studying Utah bats. There is still much to learn about the habits of spotted bats, but it is thought that they inhabit the southern third of the state and central portions of the west desert. According to studies conducted in Utah, it appears that spotted bats select sandstone or limestone cliffs in open areas for roosting sites. Initial studies also indicate that spotted bats prefer moths but will, on occasion, feed on other insects. Spotted bats, and other bats of this family, are highly maneuverable and use sophisticated sonar to catch insects in flight.

The young are born in early summer and are nearly helpless until they are about three weeks old. During birth, the mother bat takes a heads-up position, and as the babies are delivered they are caught in the mother's tail membrane. Biologists have observed mother bats to be very caring and nurturing. One researcher described the mother-young relationship after witnessing a spotted bat give birth to one young in a laboratory setting as follows: "Gentle and attentive. She first smelled him, then licked his face, ears, wings and back. Sometimes she gently nibbled his ears. When mother and baby were hanging upside down and resting, she often shielded him with her partially outstretched wings."

For more information about other Utah bats, check out the resource file on page 2.

In Utah-Smallest Wingspan

The western pipistrelle (*Pipistrellus hesperus*) is the smallest of all Utah bats, weighing 1/10 to 1/20 of an ounce, with a wingspan of 8.6 inches (21.5 cm). In fact, the pipistrelle is the smallest bat in the United States.

Pipistrelles are probably found statewide in arid areas that have a nearby water source. They are often found in canyons (sometimes being called "canyon bats"). Pipistrelles use rock crevices, mines and caves with crevices, bushes, trees and occasionally buildings as roost sites during the day.

This small bat emerges earlier in the evening and stays out later in the morning than any other bat species, sometimes being seen during broad daylight. They are opportunistic feeders, but seem to prefer small insects like leaf hoppers, moths and flying ants.

In Utah-Greatest Wingspan
The big free-tailed bat (*Nyctinomops macrotis*) has the greatest wingspan, measuring 17 inches (42.7 cm), of any bat species inhabiting Utah. It weighs 26 grams.

Nyctinomops macrotis is also one of Utah's rarest bats. They have been found from central to southern Utah in rugged, rocky country, often near steep canyon walls. They also have been found in arid sagebrush flats as well as riparian areas. During the day, they are known to roost in caves, cliff crevices and buildings.

Big free-tailed bats usually emerge to feed in total darkness and prefer to feed on moths, but they also will take ground insects, such as crickets and ants. According to Zeveloff in *Mammals of the Intermountain West*, big free-tailed bats are so rare in Utah that many of their habits are still unknown.

In the World-Smallest Wingspan

The smallest bat in the world is Kitti's hognosed bat (*Craseonycteris thonglongyai*), also known as the bumblebee bat. This little bat is also the smallest mammal in the world! It has a 6 inch (15 cm) wingspan and weighs 0.05 ounces (1.5 gms). In other words, its body is slightly larger than a jellybean, and it weighs less than a dime. It is tailless, has a piglike nose and eats insects. It was described in 1974, and the total number of Kitti's hognosed bats is thought to be only about 200 individuals. This bat lives in the bamboo forests and tea plantations of Thailand.

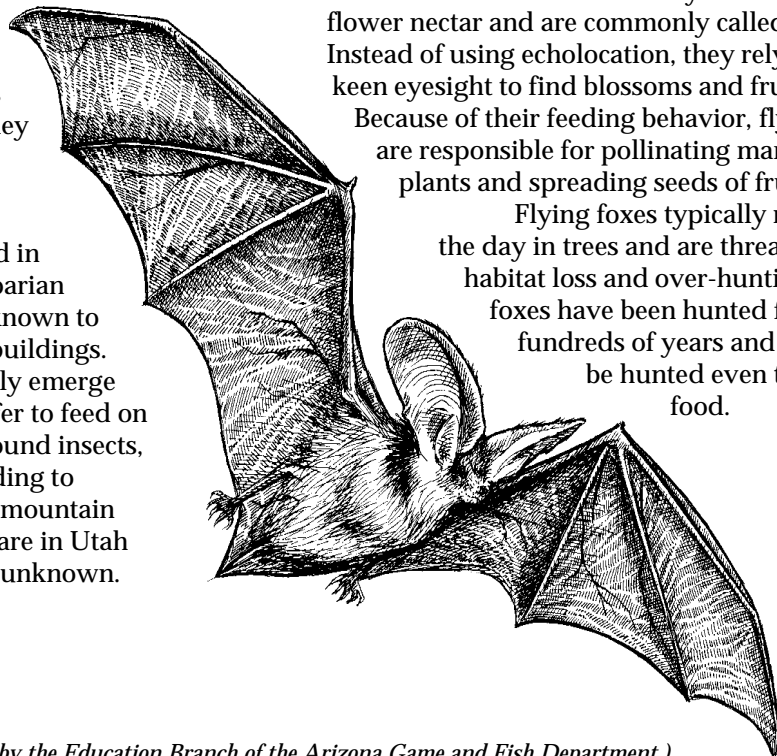
In the World-Greatest Wingspan

The largest bat in the world, according to "Bats," the ZooBook publication from Wildlife Education, Ltd., is the large flying fox bat (*Pteropus vampyrus*) found in Java. It has a wingspan up to 6 ft. (1.8 meters) and weighs about 2 lbs. (.91 kilograms).

Flying foxes are so named because of the foxlike look of their faces. They feed on fruits and flower nectar and are commonly called fruit bats. Instead of using echolocation, they rely on their keen eyesight to find blossoms and fruits at night.

Because of their feeding behavior, flying foxes are responsible for pollinating many tropical plants and spreading seeds of fruit trees.

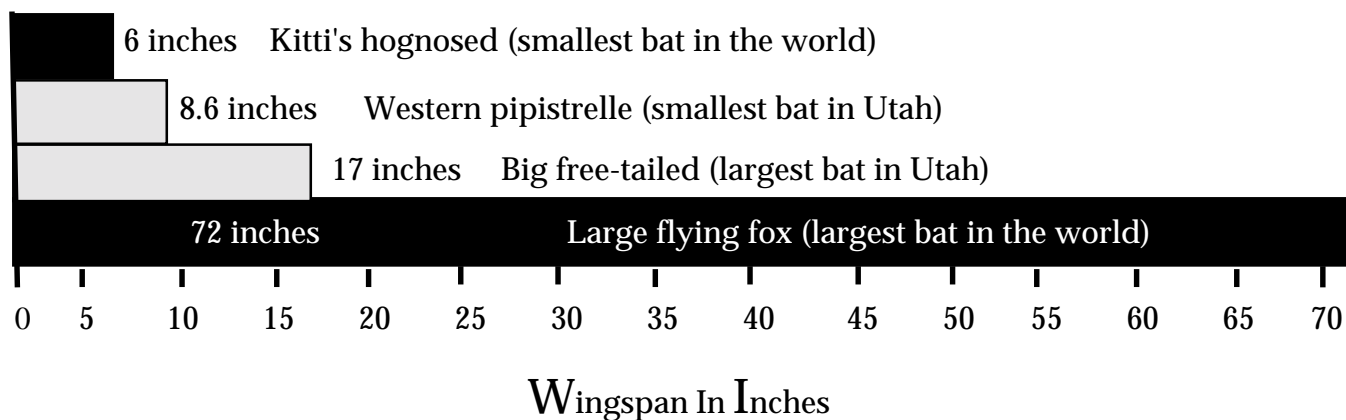
Flying foxes typically roost during the day in trees and are threatened with habitat loss and over-hunting. Flying foxes have been hunted for hundreds of years and continue to be hunted even today for food.



spotted bat

(Adapted from an activity developed by the Education Branch of the Arizona Game and Fish Department.)

Use the measurements below to create silhouettes of the largest and smallest bats in Utah and in the world! You can enlarge the silhouette using an overhead projector or you can draw your own bat. You might also want to prepare a graph or chart comparing the weights of the four bats (refer to page 4 for weight information).



(Adapted from an activity developed by the Education Branch of the Arizona Game and Fish Department.)

Investigate flying foxes by trying this cooperative graphing activity on your schoolyard sidewalks or playground before Halloween. Place students in small groups. Give each group a copy of the flying fox grid, chalk, meter stick or other measuring devices.



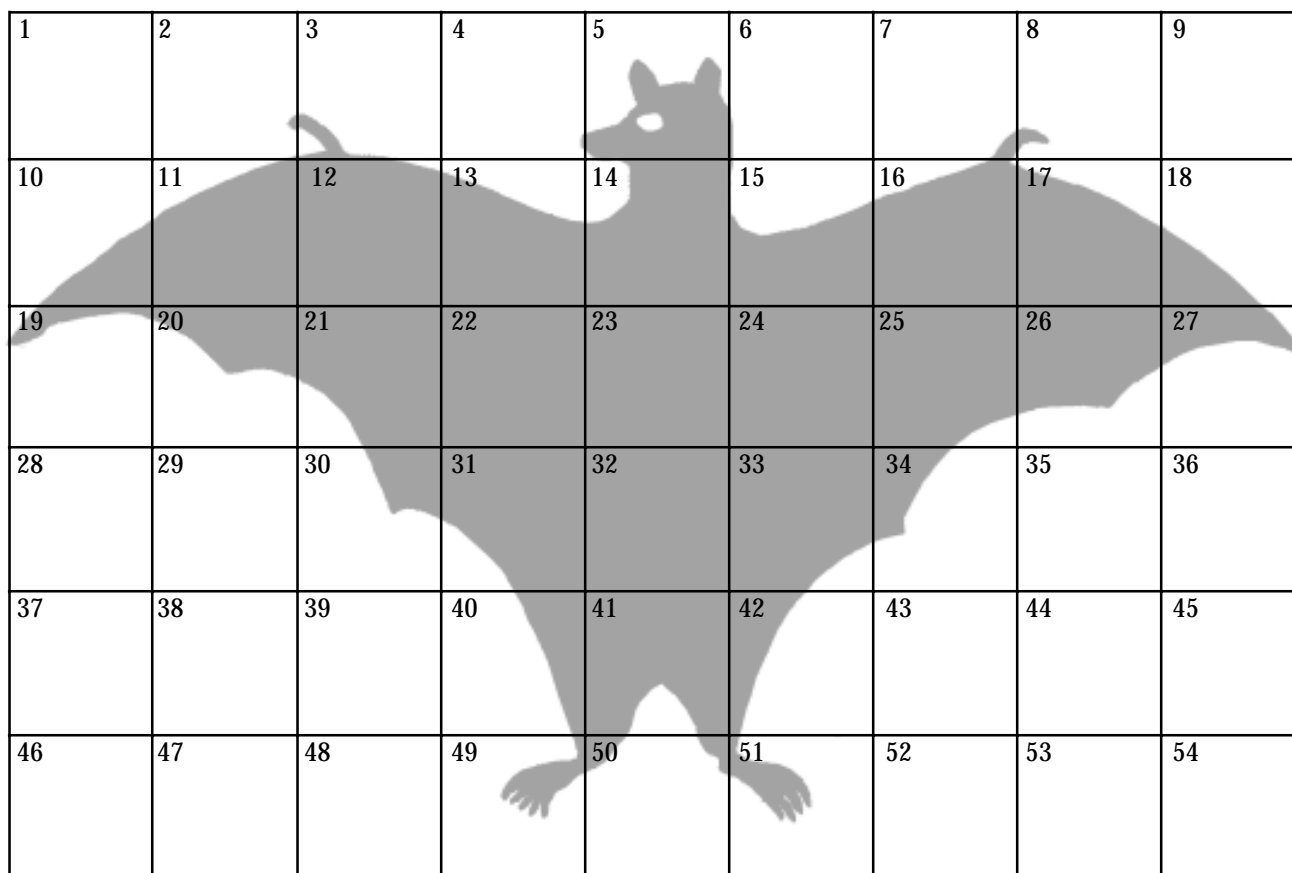
Tell each group that some flying fox have a wingspan of six feet! Ask the students to transfer the flying fox from the paper to the playground. This will require the students to do some math. Each square on the paper is 1.8 centimeters or .75 inches. If the bat has a wingspan of 1.8 meters or 6 feet, what will be the size of each playground square? Or you can present this as a cooperative problem solving activity and allow the students to come up with their own approach. After the bats are drawn, provide each group with black and brown tempera paints so they can color their bat like the real flying fox.

Materials

- playground chalk, white
- black and brown tempera paints
- measuring tools: meter stick, ruler

Finally, you can ask students to investigate flying foxes in their small groups. They might be surprised to discover that flying foxes are important agents of seed dispersal in tropical forests and critical agents of pollination for many tropical fruits!!

Adapted from an activity designed by Judith McKee in Science & Children , October 1992.



Bat houses have been used for more than 60 years in Europe, and they have become increasingly popular in the United States. Bat Conservation International (BCI) has compiled recommendations that are crucial to proper bat house construction, placement and use. Their bat house plans are designed according to current information on North American crevice-roosting bats. In the western United States, according to BCI, a variety of small bat species (commonly referred to as mouse-eared bats), are most likely to use bat houses.

The bat houses that are most likely to attract bats are those placed near a permanent source of water, especially a marsh, lake or river. They should be hung about 12 to 15 feet above the ground in a location where entry is unobstructed and bats have easy access. A bat house can be placed on a tree or pole, although those attached to the side of buildings have had the most success (possibly because of increased temperature stability and protection from predators).

If you're interested in building a bat house and monitoring its use, contact the Project WILD office (801-538-4719) for complete information and plans published by Bat Conservation International.

When You're In Bat Country --

Bat Watching Ethics

• **Strive at all times to disturb as little as possible roosting, foraging or other activities of bats.**

• **At roost sites stay as far away from the bats as possible.** Keep lights, flash photography, noise, and other activities in the vicinity of a roost to a minimum. Although some bats sometimes persist in using a roost site despite attempts to discourage them, many others abandon their roosts after minimal disturbance.

If you are observing roosting bats do it from a distance, using your binoculars when possible. If you must approach or pass close by them, try to do it in small, quiet groups, each with just one light. Groups talking or laughing loudly, banging equipment, shining flashlights and taking several dozen photographs will be serious disturbances to almost any group of roosting bats.

*Keep in mind that you are
10-15 times taller and at
least 800 times bigger by
weight than even the largest
bats in Utah.*

• **Refrain from visiting maternity roosts during the nursery season (May through July).** This is one of a bat population's most vulnerable periods because such disturbance is likely to cause young bats to lose their grip and fall to the floor, thus increasing injuries and deaths. It may also cause roost abandonment.

• **Do not disturb, much less awaken, hibernating bats.** Lights, noise, flashbulbs, etc. will arouse hibernating bats. Arousal from hibernation increases use of stored energy reserves and may thus decrease the time a bat can stay in hibernation. This depletion of energy reserves and shortened hibernation may result in the bat awakening too early in spring, reducing its chances for survival.

Developed by Arizona Game and Fish Department, Education Branch.

Black-footed Ferrets -- North America's Rarest Mammal

A curriculum guide on black-footed ferrets, called *The Black-footed Ferret, Understanding An Endangered Species*, has been developed by Badlands National Park and is available without charge through the Project WILD office (801-538-4719).

The fully illustrated guide consists of a workbook containing lesson plans targeted for students in grades 4-8 and will give teachers and students information and activities designed to help them learn about this rare mammal. There are nine major activity headings, each composed of three or more activities:

- Meeting the Mustelids -- an introduction to the mustelids (skunks, weasels, otters, etc.)
- The Finicky Ferret -- specialization vs. generalization in nature
- Vertebrate Verbology -- animal names that are used as verbs in English
- Little Town on the Prairie -- biological diversity and the black-footed ferret
- Seeing Is Deceiving -- animal masks and adaptive coloration in wildlife
- Jewels of the Night -- the role and function of eyeshine in animal night vision
- Track Tales -- animal tracks as artistic inspiration
- Endangered Strangers -- understanding the "e" words, endangered and extinction
- The Ferret Puzzle -- how the ferret became endangered and what is being done about it

This interdisciplinary curriculum includes a glossary and resource list. Its purpose is to increase awareness of ferrets and provide information on ferret biology and behavior. It does not take a position on black-footed ferret recovery programs.

Even though the black-footed ferret curriculum has been developed in South Dakota, it is not site-specific to South Dakota. It is relevant for use in any of the twelve western and midwestern states and two Canadian provinces where ferrets once lived. In Utah, the Division of Wildlife Resources, Bureau of Land Management and U.S. Fish and Wildlife Service are currently working on a plan to reintroduce ferrets in the northeastern part of the state.



The National Park Service requests that we keep a record of the grade level and number of students to whom the activities are being taught.

Utah Notebook Series on Ferrets Available

You can find out more about black-footed ferrets by requesting one of the new issues of the Wildlife Notebook Series. In Utah, black-footed ferrets have not been sighted since the 1950s, and they are considered the rarest mammal in North America. **Call the Project WILD office (801-538-4719) for a free copy of the Wildlife Notebook Series #8 on black-footed ferrets or pick one up at a Wildlife Resources regional office.**

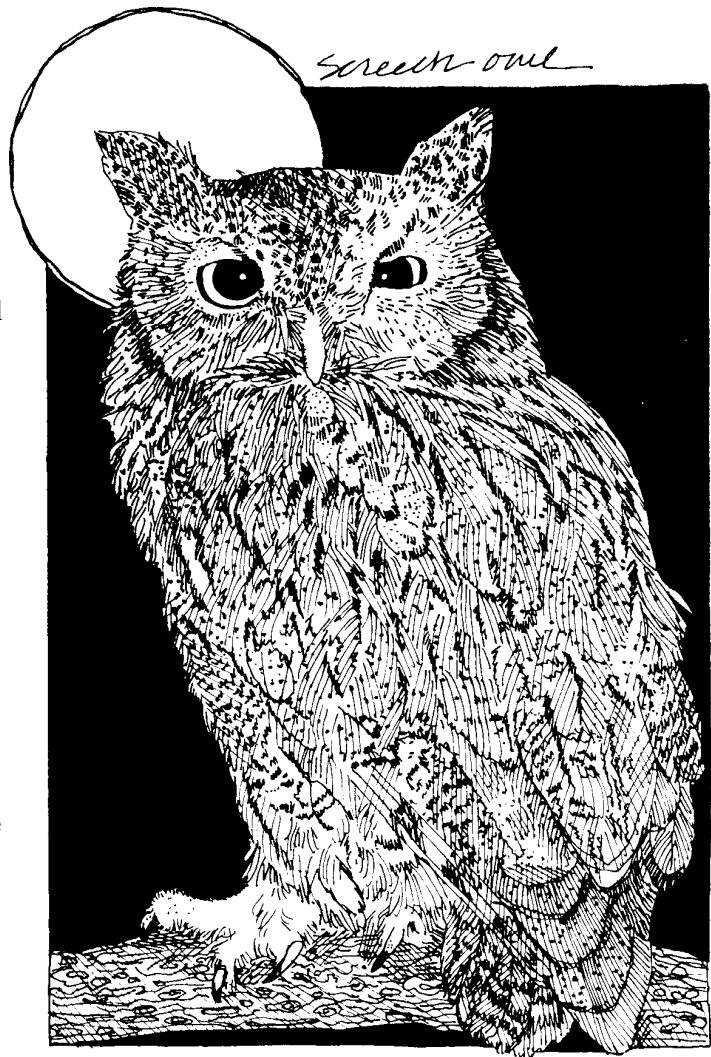
Action

Western Screech-Owl

The screech-owl (*Otus kennicottii aikenii*) sounds nothing like its name would imply. In fact, their call is described as a hollow, mournful, wailing sound. Its shivering hoot and mysterious yellow eyes make this nocturnal creature the subject of many superstitions around the world.

The western screech-owl commonly occurs in Utah and ranges in color from light gray to light brown. This species also has black streaks or barring on the underparts and gray or brown ear tufts. It looks similar to a great horned owl, but smaller. An adult usually reaches 7 to 10 inches from bill tip to tail tip and has a wingspread of 19 to 22 inches.

Mating occurs in March or early April, however, screech-owls may begin looking for nesting sites as early as January. Two to seven eggs are laid and are incubated for 21 to 30 days. At night, the female remains with the nest while the male forages for birds, insects, and small mammals (screech-owls are great mousers).



A Hoot Of A Project!

The screech-owl nesting box project offers a unique opportunity to observe and learn about these raptors first-hand. Specifications for building a nesting box are on page 10. Remember, boxes need to be placed in the proper habitat and location. Western screech-owls are generally found in:

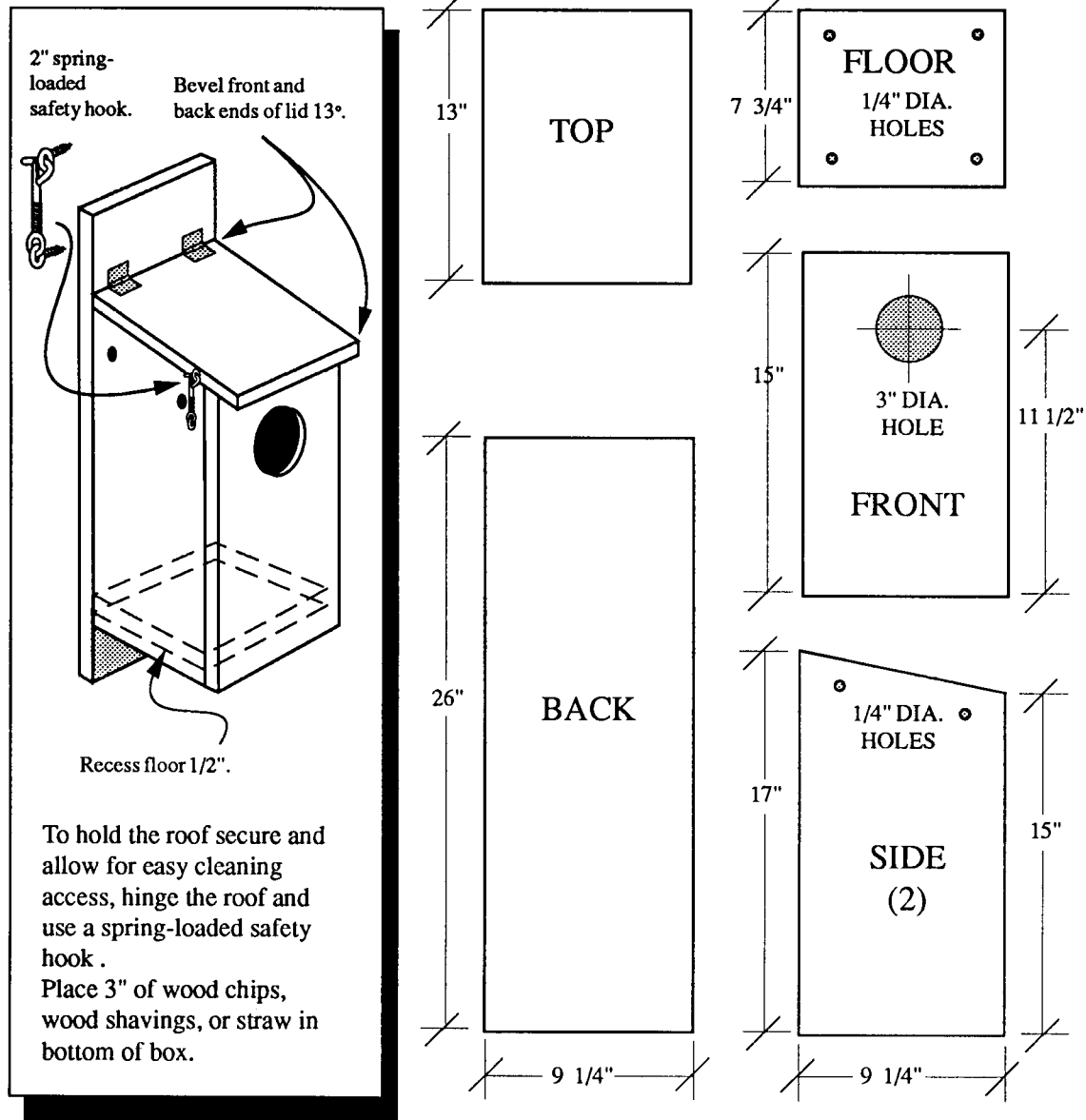
- willow-cottonwood environments along streams
- orchards along bench areas (apple orchards are a favorite)
- wooded parks, cemeteries, and golf courses
- wooded lots or tree farms

Nesting boxes should be placed 12 to 20 feet above the ground. It is important to choose a location where the owls will not be disturbed. Placing a nesting box near a busy sidewalk may cause the birds to abandon their young or act aggressively toward "intruders." The owls are monitored through observations recorded on a data sheet provided by the Division of Wildlife Resources. When the nesting season is over (about late fall), nesting boxes should be cleaned and data sheets should be returned.

For more information, contact Bob Walters, Raptor Biologist, at the Division of Wildlife Resources at 801-538-4771.

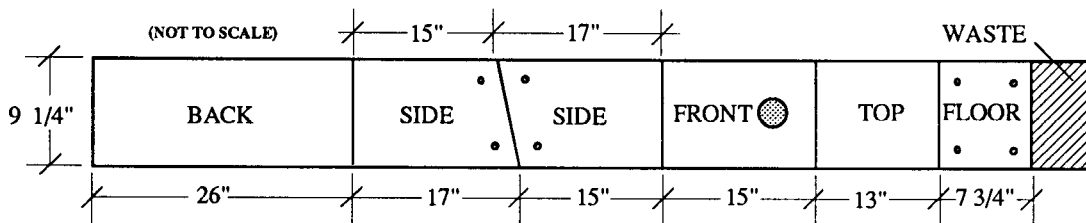
Screech-Owl Nest Box

Reprinted with permission from Iowa Department of Natural Resources (developed as part of Nest Box Program for American Kestrels).



LUMBER: One 1" x 10" x 8' 0", (#2 white pine recommend). Painting the box will increase its useful life.

HARDWARE: Twenty-two 1 1/2" wood screws (#6), two 2" hinges and one 2" spring-loaded safety hook.



Action

Audubon All Species Day -- Oct. 30

The National Audubon Society is offering teachers and students an opportunity to take action on behalf of endangered species. Motivated by a recent Weekly Reader survey of 86,000 school children which indicated that environmental protection was their number one issue of concern, Audubon created the All Species Day project. This project is one part of a larger endangered species campaign and includes the first Audubon activist toolkit for children, with printed materials designed to teach them actions they can take to help wildlife.

What is it?! Audubon All Species Day is an opportunity to raise awareness about the importance of protecting endangered species and their habitats. All Species Day will occur near the time that Secretary of the Interior, Bruce Babbitt, launches the \$179 million National Biological Survey. Audubon first presented this idea at the 1993 National Education Association convention and received positive reactions from teachers. At the classroom level, teachers saw this project as a positive alternative to the current focus of Halloween.

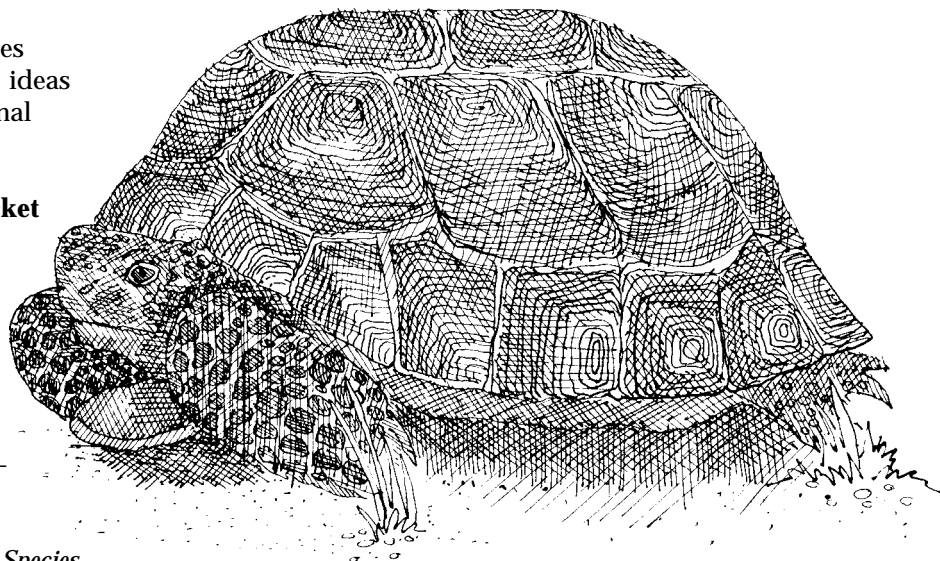
What's available for teachers?! The Information Packet developed by Audubon is targeted for grades 4-6 and will include:

- endangered species list
- curriculum guide with lessons and activities about endangered species (interdisciplinary, includes music and arts)
- "Create a Habitat" skit
- species fact sheets
- information resources
- "Create a Costume" ideas
- description of national contest

The Information Packet is available for \$10 from Audubon All Species Day, National Audubon Society, 666 Pennsylvania Avenue S.E., Washington, D.C. 20003.

Also available is an 8-minute video for children entitled *Jurassic Ark: If Only Dinosaurs Had the Endangered Species Act* (\$5). This video emphasizes the success stories of protecting endangered

species and urges children to get involved. It is narrated by 11-year-old Lyle Solla-Yates who founded Pals of Wildlife to save the manatee and other endangered species.



desert tortoise

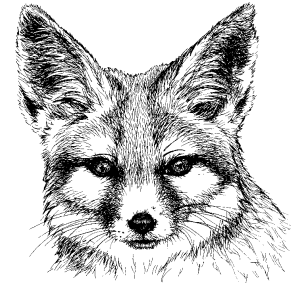
Audubon Month Features Endangered Species in April

Audubon's Education Division has made endangered species the theme of next April's Audubon Month. An endangered species poster and curriculum materials will go out to classrooms participating in the *Audubon Adventures* classroom program. A subscription to *Audubon Adventures* cost \$30. Order by writing to *Audubon Adventures*, 613 Riversville Road, Greenwich, CT 06831 or contact your local Audubon chapter.

Resources

Call the Project WILD office (801-538-4719) for free copies:

New Wildlife Notebook Series on kit fox is now available. Continue your studies of Utah's nocturnal animals by investigating the kit fox. The smallest of Utah's foxes demonstrates unique adaptations to desert environments.



Free, colorful poster of midwest birds which migrate to the tropics of Mexico, West Indies and Central and South America. Notes on migration patterns and habitat requirements are on the back, from Midwest Neotropical Migratory Bird Conservation Program.

Excellent, free teaching poster (2 feet x 4 1/2 feet) to accompany HOOKS AND LADDERS, from Alaska Natural History Association, entitled "Alaska's Salmon Resource: Importance to the Ecosystem."

Check out from the Project WILD office (801-538-4719):

Wild Places: Cactus Desert (10 minutes/elementary - video) -- A look at desert communities with a focus on diurnal and nocturnal animals.

In Our Children's Food (60 minutes/intermediate-secondary - video) -- Bill Moyers traces the 30-year history of pesticide use, regulation and scientific study in the U.S. Explores what is known and is not known about the risks of agricultural chemicals in our food. Good for issue investigation.

Night Creatures by Susanne Santoro Whayne -- Nonfiction book for elementary level, explores nocturnal animals in the neighborhood, skies, country, forests, deserts and ocean.

Write for:

Free "Teacher's and Educator's Information Packet (and student's packet) from NOAA Marine Debris Information Office, 312 Sutter Street, Suite 606, San Francisco, CA 94108 (415-391-6204). Includes detailed information and activities to support PLASTIC JELLYFISH.

Free catalogue from Bat Conservation International with educational materials, including videos, books, posters and activities. Contact BCI, P.O. Box 162603, Austin, Texas 78716 (512-327-9721).

Information about a new curriculum called "Think BATS!" from Jane Jennings, 12500 Sheldon Road, Mantua, Ohio 44255, or call 216-274-2641.

Watch This!!

Utah Raptor Watch Day
Saturday, September 25

Come out and enjoy the mystery and magic of raptor migration. The Division of Wildlife Resources, Hawk Watch International, Raptor Flyways, Inc., and the U.S. Forest Service are sponsoring this first annual event. Five sites will provide the general public with viewing opportunities. Each site will offer lectures on raptor migration and identification. Volunteers are needed if you have previous experience monitoring raptor migration. *For more information, call Bob Walters at 801-538-4771.*

Action

It's Time To Apply For A Schoolyard Naturescaping Grant

For the third year in a row, Project WILD will offer ten \$300 Naturescaping grants to Utah's teachers.

What is Naturescaping? An action project designed by students and teachers to establish a natural habitat area on your school grounds.

Why focus on habitat? Providing habitat for diverse populations of wildlife is of increasing importance. Naturescaping projects allow young people to take a positive action for wildlife while developing an outdoor area that can be used as an outdoor classroom.

How large a project does it have to be? It can be as simple as a bird feeding area or a butterfly garden or as extensive as a "nature center." Many schools use the Naturescaping Grant as "seed" money and solicit additional funding from community and school sources.

The emphasis should be on:

- student involvement in planning and implementation
- reestablishing a natural area
- the effective use of the area for interdisciplinary studies.

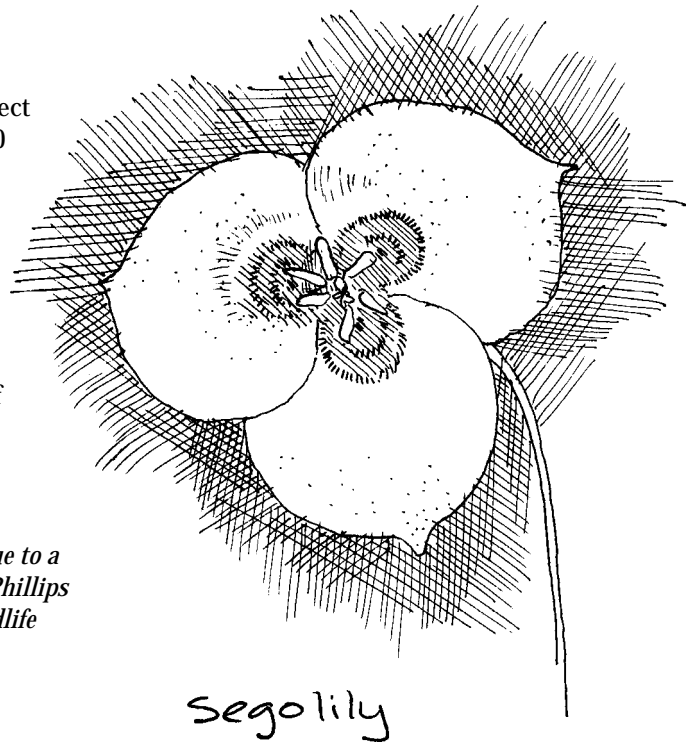
Here's how to apply:

- Request an application packet from Project WILD, 1594 West North Temple, Ste. 2110 Salt Lake City, UT 84116.

- Complete the application form and return it to the Project WILD office by October 31, 1993.

With your application, we'll send you *Creating Landscapes for Wildlife* and a correlation of Project WILD and Project Learning Tree activities for outdoor classrooms.

Utah's Project WILD will be able to fund Naturescaping Grants for the next two school years due to a grant from the National Project WILD Program, the Phillips Petroleum Foundation and the National Fish and Wildlife Foundation.



Wildlife Education Workshops

Desert Ecology

a wildlife education workshop
for teachers in grades K-12
designed to explore a Utah desert
and study desert plants and animals

location in southern Utah to be announced
may require camping
limited to 15 participants
April 15, 16, 17
Friday evening through Sunday noon

\$25 fee for workshop
content and activities are
correlated to science core curriculum

Raptors of Utah

popular wildlife education workshop
returns for third year
focuses on hawks, falcons, owls & eagles
complete with field trip
to view wintering bald eagles
for teachers in grades K-12

two locations:

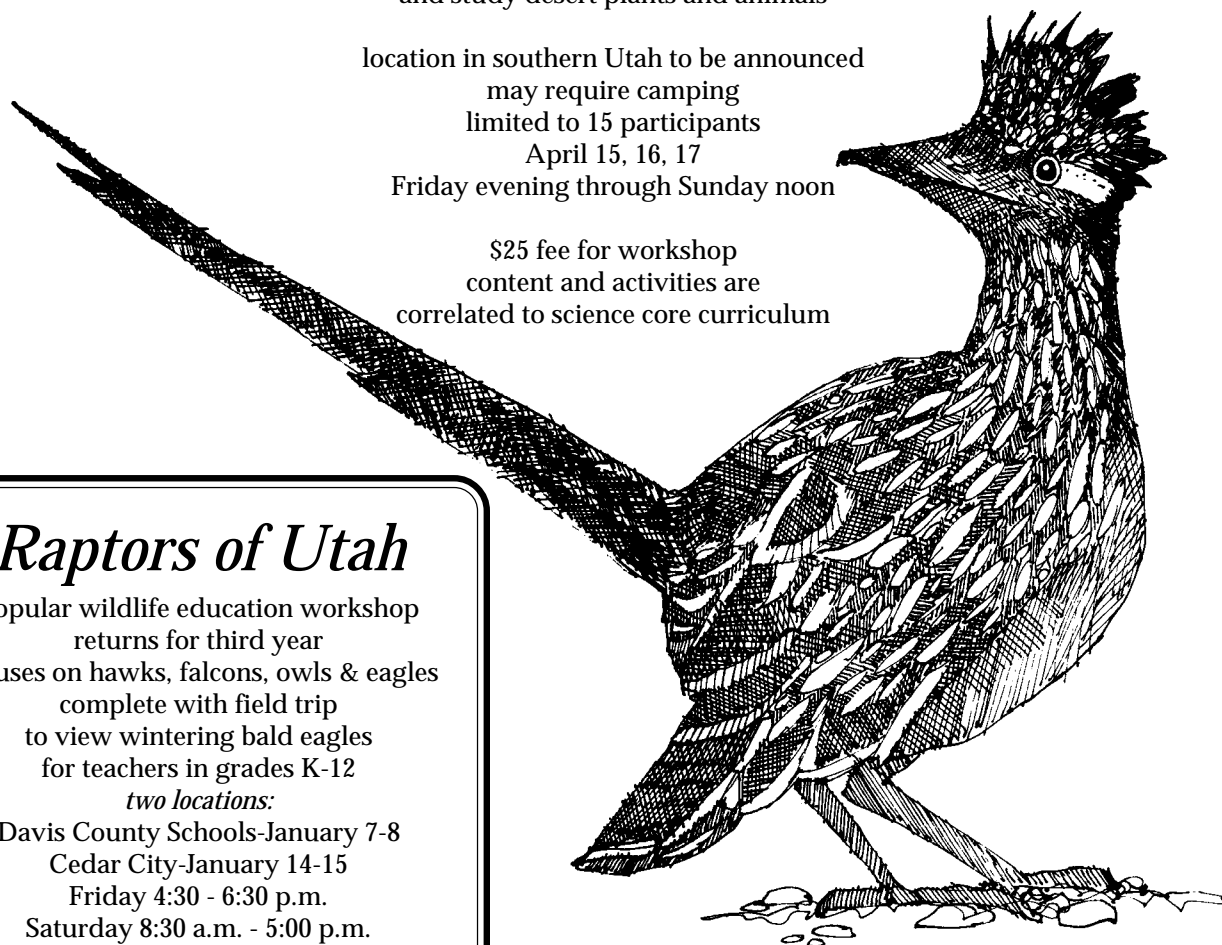
Davis County Schools-January 7-8

Cedar City-January 14-15

Friday 4:30 - 6:30 p.m.

Saturday 8:30 a.m. - 5:00 p.m.

Live Birds



roadrunner

To register for the Desert Ecology or Raptors of Utah Workshops, return this form to Project WILD, 1594 West North Temple, Ste. 2110, Salt Lake City, UT 84116. Call 801-538-4719 if you have questions. *Credit available. Workshop fees will be collected later.*

Name _____ Phone _____

Address _____

_____ I want to attend the Desert Ecology Workshop (\$25 workshop fee)

_____ I want to attend the Raptors of Utah in Davis County (January 7-8)

_____ I want to attend the Raptors of Utah in Cedar City (January 14-15)

Writing For The Land

A Project WILD Advanced Workshop
designed for science and English teachers
in grades 6 through 12
offers a unique opportunity to explore
writing, literature and the natural world
and how they may be integrated successfully
into the classroom curriculum

June 24, 25, 26
Friday evening 8:00 p.m.
through Sunday noon
*following summer solstice
and June's full moon*

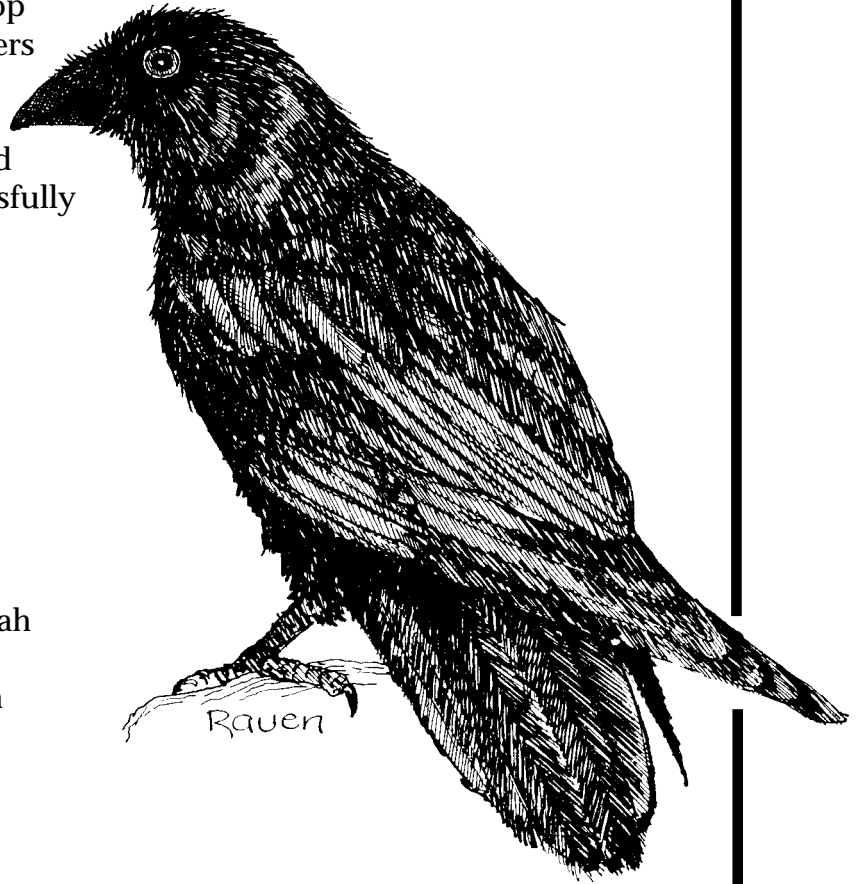
at historic Cunningham Ranch
sitting at the base of the Bookcliffs
about 40 miles from Green River, Utah

provides creative experiences with
four western authors:
Margaret Rostkowski
Karen Chamberlain
Joan Puma Bennet
C.L. Rawlins

\$20 fee for workshop

credit available

*co-sponsored by the Utah Division of Wildlife Resources
and the Utah Arts Council Literary Program.*



*Participants in the Writing For The
Land Workshop need not be trained as Project
WILD teachers. We invite all interested
science, English, and language arts teachers to
register. Limited to 25 participants.*

To register for the Writing For The Land Workshop, return this form to Project WILD,
1594 West North Temple, Ste. 2110, Salt Lake City, UT 84116. Call 801-538-4719 if you
have questions.

Name _____ Phone _____

Address _____

_____ School _____

Grade level _____ Subject Taught _____